VOL. XII, No. 25. DECEMBER 9, 1915

THE JOURNAL OF PHILOSOPHY
PSYCHOLOGY AND SCIENTIFIC METHODS

COMPARATIVE STUDY OF SPINOZA AND NEO-REALISM AS INDICATED IN HOLT'S "CONCEPT OF CONSCIOUSNESS"

IN the temporal order of things, it is a long way from Baruch Spinoza to Edwin Holt, but certain similarities—one is tempted to say identities—in method and tone of thinking make them more like neighbors than ancestor and descendant in the philosophic domain. The student of philosophy who, like the poet, hobnobs with the past and the distant until these rigid categories seem quite dissolved, notes in the systems of these two men, more than apparent differences in content, surface resemblances that invite study and promise conclusions. I refer to a devoted and passionate use of mathematical form—dominant in Spinoza's style and Holt's thinking.

A similarity of background, more than chance coincidence of interest and mode of expression, lies responsible for these mathematical flowerings in philosophy. Preceding Spinoza and contemporary with him, the sixteenth and seventeenth century science, with its discoveries associated with the names of Copernicus, Galileo, Kepler, and Newton in physics, astronomy, and mathematics, contributed new significance and power to the last, and stimulated a fruitful interest in its methods and scope. Descartes, incorporating the new "scientific method"—as yet no other than the "mathematical method"—into philosophic speculation, set the fashion for expressing metaphysical truth in terms of equations, axioms, and propositions. Spinoza fell in with the styles, and ordering his theories like a treatise of Euclid to the point of being inordinately abstruse clearly became an extremist in the latest fashions. The mathematical character of the new truths made it seem inevitable that in the unity of nature all truths must be mathematical; precisely as in the later ninteenth century the advances in chemistry, physics, and biology, accompanied by a growing use and emphasis of the number science, has persuaded Holt that both the stuff and form of being are mathematical. Behind Holt and contem-

porary with him is what he chooses to call the "Renaissance of Logic" in the forms of symbolic logic, or algebra of logic.[1] Every laboratory contributes to the mathematics that is in the air, and makes the dominant coloring of Holt inevitable and representative.

Spinoza, as a radical devotee to mathematical method, treats of the nature and force of emotions as he treated mind and substance—exactly as he "would treat lines, planes, and bodies," for, as nature and her laws are uniform, the manner of comprehending her must likewise be so. Indeed, the universal laws are themselves this manner. In short, Spinoza sees nature to be logical and mathematical, and inevitably makes his treatment such. Holt, in turn, finds mathematics and logic to be the basic sciences, the sciences of pure being; for him, consequently, all things that *are* must be subject to these sciences. To anticipate conclusions later to be developed, Holt, like Spinoza, finds nature uniform, after a fashion, in law and substance; but he goes Spinoza one better, for where Spinoza finds nature to be profoundly modified by mathematical and logical entities, Holt finds her to be entirely constituted of such entities. Spinoza, although not so frankly stating it, even more radically implies this in his geometrical style of presentation; whereas Holt is content to use what in his own terminology he would call the "more complex" style of ordinary English exposition.

This apparent formal resemblance will be found to be not merely historical in origin and not the one resemblance. A hasty objector will remind one that Spinoza is a semi-medievalist, a rationalist, a pantheist, and a monist; whereas Holt is a modern, a radical empiricist, a pluralist, and a realist, and that their only possible kinship is their brotherhood through Adam. In answer, the purpose of this paper is to show that in Holt and Spinoza, these differences are in a great part verbal, and that the mathematical characteristics on the surface of these philosophies come from common fundamental similarities which I propose to trace, and in the tracing of which, I propose to indicate the fundamental divergences as well. This is less an attempt to wrench meanings from their temporal moorings and bring Spinoza up to date than to suggest by how much Spinoza has anticipated contemporary neo-realism. As the Spinozistic philosophy in its ethical and political aims is the more comprehensive of the two, I am for the most part compelled to disregard Spinoza's priority in time, and to adopt and compare his conceptions to those

[1] Holt opens his book, "The Concept of Consciousness" with the acknowledgment that "recent investigations in this field (symbolic logic) have brought out a number of new truths . . . which seem to me to bear importantly on philosophy as a whole, and especially on epistemology." He then proceeds to review the work germane to his purpose of Russell, Poincaré, Huntington, Franklin, and others.

of Holt. This will necessitate following Holt's order of exposition rather than Spinoza's.

I

Method

Similarity in Method of Understanding; Differences in Method of Procedure.—Method in philosophy divides itself into epistemology—method of understanding; and technique—method of procedure. "How we know" is given preference even to "what we know," and so it is conventional to discuss first the "how we know" of Spinoza and Holt. For Spinoza, the matter is summed up rather shortly in his "Tractatus de Intellectus Emendatione,"[2] where method is defined as knowledge reflecting upon itself, seeking to find the best means of understanding. In this definition, the power of direct or intuitive perception is implied. The intellect must of necessity be granted as capable of obtaining a true, an immediate, and an adequate idea of its object (*ideatum*), or the thinking process could never go on; for once the validity of knowledge be questioned, the proposed method of knowing must first be tested by a "method" of a method, and so on *ad infinitum.* If we have to prove that we know, we will have to prove how we know we must prove that we know, etc. Consequently, the existence of method must postulate the existence of intuitive or self-guaranteeing knowledge. Searching for the best method, Spinoza finds the adequate mode of perception to be that "wherein a thing is perceived through its essence alone, or through a knowledge of its proximate cause."[3] Perception through essence alone is another term for "true idea," which is no other than intuition.

Holt is a radical empiricist who emphasizes "being" rather than "being experienced" as the fundamental reality, fundamental because universal and because its negation is impossible. *"Being not* are words without meaning."[4] Avoiding a discussion of the pragmatist's possible comment that "without meaning" can only mean inexperienceable, and the rationalist's comment that "without meaning" can only mean unthinkable, and hence the Holtian term "being" is merely shorthand for "being experienced" or "being thought," we find in Holt no criterion for the detection of the reality of "being" apart from its own existence. Precisely as in Spinoza, true knowledge of "being" is immediate, is assumed, is intuitive.

One apparent difference (to be noted, though not to be accepted)

[2] Spinoza, "Tractatus de Intellectus Emendatione," Sec. IV.

[3] *Idem.*

[4] Holt, "Concept of Consciousness," page 21.

is found in the Spinozistic statement, "A true idea is something different from its object (*ideatum*). For a circle is one thing, and the idea of one another."[5] Holt would maintain a thought to be the same as the thing thought of, and we hope later to show a fundamental similarity in the two positions.

A real disagreement, however, is to be found in their methods as methods of procedure. Spinoza's method of understanding, we have found, postulates intuitive or true knowledge, and the best method becomes the one that reflects upon the truest knowledge—the truest idea; and Spinoza finds that the only idea whose content is a guaranty of its reality is the idea of the Whole. Only the Whole (God, Reality, *Ens Perfectissimum*) is self-dependent and self-contained. Consequently, Spinoza in his treatment of the universe proceeds from the Whole to the parts, logically deducing the properties and relations of the parts from his postulations regarding the Whole. He begins with a definition of God or Substance from which he draws various conclusions as to the relations between the parts and as to the nature of God, who is the Whole; then proceeds to a discussion of the nature and origin of the mind in man; and then of man's emotions; and so places himself in a position logically to exhibit the ethical values which are the purpose of his work. The Whole with which he begins is perforce richer and more complex in qualities and attributes than any of the parts; and the parts, as they are (artificially) subdivided by the inquiring man, become more meager and limited in cosmic virtues.

Holt purposes to begin, exactly as Spinoza, with a self-dependent "given" from which—not in complex-to-simple, but in simple-to-complex order—he will logically deduce the teeming, intricate structure of the Whole. This completely self-dependent he exhibits in "being"; whereas Spinoza finds the completely self-dependent in "being everything." Holt's "being" is indeed the simplest of terms; but, in deducing the complex from this simple, he is compelled to add constantly to his "given" (in a manner which we will presently describe in detail) with the result that his method is not deductive so much as synthetic. The entire movement of Holt's exposition must be conceived of as an accretion of complexities; of Spinoza's, as deduction from complexities.

This opposition of movement in method will be apparent in a short résumé of substance, as defined by both philosophies.

[5] Tract., paragraph 33.

II

Substance

Substance for Spinoza: Attributes, Modes, Individual things; relations between Idea and its Object—Substance for Holt: neutral entities, their hierarchy in simple to complex order—Differences in movement and similarities in content in the two conceptions of Substance—Introduction of causal element, showing likenesses in concept of definition

Substance, for Spinoza, comprised the whole universe, the whole realm of being. "I understand substance to be that which is in itself and is conceived through itself: I mean that the conception of which does not depend upon the conception of another thing from which it must be formed."[6] The only thing to be so conceived is everything, for everything alone stands uncaused, and independent of anything save itself for existence. A synonym in Spinoza for this substance is God.[7] God, substance, or everything exists for man and is revealed to man in two attributes of its infinite being: it exists and is revealed in extension and thought. "We neither feel nor perceive any individual things save bodies and modes of thinking."[8] As a self-sufficient fact, however, substance consists of infinite attributes—ineffable and unknowable to man. All possibilities, all realities past the power of man to think or feel exist in God;[9] but, so far as man is concerned and can be concerned, the universe is limited to thought and extension, to the old, familiar mind and matter. Furthermore, these two attributes are apparent to man in modifications—facets or aspects of substance which depend upon their attribute for conception, and which are designated modes.[10] Thus, table, as a generic term, as a tribe, is a mode (or modification) of the attribute of extension. Finally, the lowest step in the descending order of particularization is the individual thing which enjoys a limited, finite existence in a designated mode:[11] *This* table is an individual thing existing in the tabular mode of extension which, itself, is an attribute of the all-inclusive substance. However, *this* table has being not only in the world of extension (as revealed to my tactile and visual senses), but also in the world of thought. As an idea, it is an individual thought, existing in the general idea (mode) of the class "table." This class, itself in its turn, is a modification of that attribute of substance designated thought. In the nature of the universe, the rela-

[6] Spinoza, "Ethics," Pt. L., Def. III.
[7] *Ibid.*, Pt. L., Def. XIV.
[8] *Ibid.*, Pt. II., Ax. 5.
[9] *Ibid.*, Pt. I., Prop. XI and XVI.
[10] "Ethics," Pt. I. Def. V.
[11] *Ibid.*, Pt. II., Def. VII.

tion between the attributes of thought and extension is in one sense parallel, immediate, and inevitable, and in another sense does not exist at all. Everything found in the world of extension is likewise in the world of thought, and conversely. This follows inevitably from the fact that all things pertain to substance, and substance is invariably expressed in the two attributes (as well as in an infinity of others) of extension and thought. But on the other hand, no causal relation exists between these attributes, because, as substance, they are identical.[12] Accordingly, table as thing does not cause table as idea; rather, table as thing is caused by an infinite causal chain of previous things in extension; and table as idea is caused by a parallel infinite causal chain in thought. Hence the substantial reality of table is one thing, which takes its place as extension or as thought according to the causal series with which it is connected; its essence is the same in both extension and in thought.

Holt, in his search for a fundamental upon which to begin philosophizing, might well have used the words of Spinoza, and have said, "I am looking for 'that, the conception of which does not depend upon the conception of another thing from which it must be formed.'" This desideratum Holt finds in the category of simple, unattired "being." Instead of beginning with the most complex and inclusive—with everything—he begins with simplest and most meager, with the first step above nothing, with modest "being";[13] and yet his "being" fulfils the definition, in words, though not in content, of Spinoza's "everything." Extremes, according to their inveterate habit, meet. Holt finds "being" to be a logical concept, made of logical stuff, and as such is neither mental nor material, for the reason that it is both. To such stuff, he applies the term "neutral."[14] Granting for a moment the immemorial warfare in philosophy between mind and matter, Holt wishes to distinguish a class of neutral entities, or "beings," which because of their immense stakes in both sides may be said to belong to neither. Intensities (of color, sound, or what not), velocities, number series, processes, "laws of nature," and the stuff of logic can not be ranked as exclusive to either army. Like the Jews in Poland, they are found fighting in all ranks. Upon examining the rights of these neutrals, Holt discovers that they include all the rights for which the belligerents are contesting, that the belligerents themselves are in fact neutrals fighting under the false flags of "mind" and "matter," and that these neutral entities are the stuff of which all reality is made. Logic offers Holt a neutral inch, and he takes

[12] *Ibid.*, Pt. II., Prop. VI.

[13] Holt, pages 20 *et seq.*

[14] *Ibid.*, pages 113–114.

a universal ell. One is likely, at first consideration, to find the notion of the ponderous mountains, sailing clouds, and the piercing thoughts of man as such stuff as syllogisms are made of rather grotesque; but familiarity in this case breeds conviction, and it is hard to escape from a reading of Holt's arguments without believing that there is more in his philosophy than one dreamed.

In accordance with the demands of logical structure, Holt proceeds to describe the universe as a neutral mosaic of logical entities, capable of deduction in a simple to complex order, a hierarchical order inherently logical and asymmetrical.[15] Holt's theory is that if the universe is a logical complication of neutral entities, in which different stages of complications can be distinguished, then, by the granting of an appropriate "given," each stage can be logically deduced from the previous one. Thus, if you begin with the generally recognized neutral world of mathematics and formal logic, you may tentatively outline a "logical deduction" of the entire universe, using for a criterion of simplicity the universality of the entity by means of which you develop your deduction. The validity of such a deduction depends upon your ability to pick the proper terms to begin with, and to discover the correct propositions which, acting on these terms, generate the deductions you are seeking. Suppose you take the term, *A*, and then allow the proposition, "*A* repeats itself" to act indefinitely upon this term. The whole system of numerical integers is the astonishingly complex result from this simple beginning, and the web of complicated relationships and intricate states of fact to be deduced from the system is appalling.

Next, suppose you consider all primary mathematics and logic, despite their internal complexities, to be the simplest system of logical terms, relations, and propositions based on the primordial "being"—and such it probably is. The problem then is to find the next simplest system, the system that is one degree more complex, the system that can be logically deduced from correct propositions acting upon mathematics and logic as a "given." You will probably find the traditional "secondary qualities" of Locke, etc., to have "purely ordinal" properties of several dimensions with varying degrees of intensity. Sound and light are notoriously reducible to mathematics, and the spectrum is so completely describable in terms of numbers that it is not an Icarian flight to imagine that, with the proper propositions, the secondary qualities could be deduced from that mathematics which we have decided is the simplest neutral system. Colors, sounds, odors, etc., range second, therefore, in a simple to complex gradation of the neutral realm. Then, perhaps, comes geometry (extension in space) with the various

[15] *Ibid.*, pages 154 *et seq.*

branches of higher mathematics; above these in due order rise mechanics (introducing mass and motion); physics; chemistry; large masses studied under astronomy and geography; organic matter as treated under botany and biology; mind, that is, the substance of psychology, anthropology, history and biography; and lastly, values—the good, the beautiful, the true. Certainly, chemistry, in the close analysis, reduces itself to physics; life reduces itself (in the opinions of many) to chemistry; and biography is a complex particularization of biology. Such a universe—the actual universe—is thus conceived as one in substance, and many only in complexities. "Being" is the most universal, and at the same time the simplest entity, and it should be noted that the more you add to it, by repeating itself, the more particular your description becomes. A man, the most individual of all things that we know of, consequently contains the richest and largest number of complexities.

The opposition of movement in the two philosophies can be seen at once. Spinoza holds that not man, but God—not the particular, but the concrete universal—includes the greatest number of complexities, for his fundamental substance is, in Holt's sense, infinitely complex. Spinoza is a magician whose hat is the universe from which he takes all things. Holt, in an equally magical, but genetically contradictory fashion, makes all things grow logically from the universal seed of "being," as a pot of flowers sprouts from a thimble under an illusionist's wand.

A somewhat close comparison will, however, reveal a number of similarities. So far as man, and therefore any discourse, is concerned, the universe of Spinoza is *duplex* in its inevitable manifestations as extension and thought. The remainder of the infinite attributes in which substance disports itself is irrelevant because unknowable. If put to it, Holt would also admit that his neutral stuff (so far as human discourse is concerned) constantly appears in two systems of relations, the so-called "mental" and "material," and that his neutral stuff never appears *outside* either of these systems. In two smashing chapters, "The Substance of Ideas" and "The Substance of Matter" in which he pulverizes mind and matter into an elemental neutral substance, Holt still does not deny the being of mind and matter.[16] He only denies their difference in substance, but maintains their differences as two *classes*[17] or *manifolds*[18] of the same substance. I shall elaborate later precisely what Holt means by *manifold,* but sufficient is hinted in saying that he describes two—the "conscious manifold" and the "physical mani-

[16] *Ibid.*, page 132.
[17] *Ibid.*, page 135.
[18] *Ibid.*, page 126.

fold'' corresponding to the ordinary terms, mind and matter. He avows the difficulty, indeed, of placing such palpably neutral entities as mathematical concepts exclusively in either manifold, but nowhere denies that all subjects of human discourse must appear at least in one of the two. I hold not my life so lightly as to hint that Holt is dualistic, but am merely pointing out that Holt's conception is *duplex* (as is Spinoza's) in that it admits mind and matter to be distinct (in class, though not in substance) and distinguishable. The similarity between Holt and Spinoza can be made more marked by transposing the terms without impairing the sense of either philosophy. Spinoza's substance is neutral stuff appearing in two systems of relations, classes, or manifolds—the mental and material. Neither mentality nor materiality as a distinct something is real for Spinoza; only substance is ultimately real. Similarly, Holt's neutral mosaic is revealed in two attributes, thought and extension.

The introduction of the causal or dynamic element into what would otherwise constitute static universes will further emphasize the similarity and the difference. Spinoza defines everything in his universe either in terms of its essence, which we have shown to be no other than the content of an act of intuition, or in terms of its proximate cause. As Spinoza finds that only everything can adequately be conceived in terms of its essence, that is, as self-dependent, the universe, when not considered as a whole, must always be conceived dynamically, actively, in terms of cause and effect. The perfect definition of anything is such, says Spinoza ''that all the properties of that thing . . . can be concluded from it.''[14] Holt might well have said this. In fact, Holt, using the logical methodology, defines everything either in terms of a ''given,'' or in terms of a proposition or law, which acting upon such ''given'' permits a logical deduction of the thing defined.[20] Undefined terms compose the ''given,'' terms which are merely exhibited or named, which are raw metal stamped with the sterling-mark of ''intuition.'' Such undefined, intuitively perceived terms coincide with ''things perceived through their essence'' as required by Spinoza. When we come to compare ''proposition'' with ''proximate cause,'' we find Holt explicitly stating that ''causality and logical necessity are one.''[21] ''Causality,'' natural law, physical activity is precisely what Spinoza means by ''proximate cause,'' and ''logical necessity'' is precisely what Holt means by ''propositions''; and, as Holt affirms, they are one. For example, suppose you set out

[19] Tract., Sec. XIII.

[20] Holt, page 16.

[21] *Ibid.*, page 132.

to define a circle. Following Holt's recipe, you collect an appropriate "given"—in this case, a straight line of which one end is fixed and the other movable. To define the line is not required; you assume it and merely exhibit it. This is what Spinoza would term "perceiving it through its essence"; an absolute knowledge of the nature of a straight line is granted you. You now permit a proposition, or proximate cause, to act upon the line. If you are wise, you will select a certain proposition which is algebraically expressed as "$x^2 + y^2 = r^2$." The line revolves, and the figure described by the free end is a circle. And so Spinoza maintains that a circle should always be defined "to be a figure which is described by any line of which one extremity is fixed and the other movable, for this definition clearly comprehends its proximate cause."[22] It is not to be understood that the proposition describes the circle in the sense that words describe a picture; the proposition, acting on the terms, *makes* the circle; the laws of gravitation *make* bodies fall; causality is real.

These likenesses are all in the matter of definition. With respect to the actual universe defined, occasion shall be taken to show that while Holt, like Spinoza, conceives the universe as changing and dynamic, the shortcomings of logic do not permit him adequately to express this idea of change. Logic is obstinately static, and Holt hardly overcomes this handicap. In sum, however, the language of the two men can again be happily transposed. *"Natura Naturans,"* the active, changing, creative universe of Spinoza is the totality of "propositions"; and *"Natura Naturata,"* the passive, static, and immutable universe is the totality of all possible "Givens," of all terms and relations.

MARVIN MARX LOWENTHAL.

MADISON, WIS.

(To be continued.)

ARE ALL JUDGMENTS "PRACTICAL"?

IT must be some time since anything has appeared in America that marks such a definite and important advance in logical theory as Professor Dewey's article on "The Logic of Judgments of Practise."[1] It appeals to me not only by the admirable lucidity and thoroughness with which it clears up inveterate ambiguities in terms (like "value," "valuation," "objective," "end," etc.) which have long obstructed progress, but also by the boldness with which

[22] Tract., Sec. XIII.

[1] This JOURNAL, Vol. XII., pages 505 ff.

it carries the war into the enemy's country, and challenges what for purposes of reference I must call the old intellectualist tradition in logic to show cause why it should not be condemned for failing even to notice the existence of an extensive class of judgments which have a distinctive verbal form and a distinctive object in something to be done in the future, and so for failing *theoretically* to explain their logical importance. This procedure entirely accords with my own endeavors to exhibit the *theoretic* defects of intellectualism,[2] and appears to be excellent tactics, because it transfers the battleground from psychology to strict and formal logic, and so disposes of the facile contention that pragmatism is "psychology," and therefore does not concern "logic," which is "independent" of psychology. The logic of real thinking is thereby extricated from the mass of psychological prejudices that oppose, and threaten to choke it, so long as the question is formulated as one concerning the bearing of psychology on logic. Professor Dewey has evidently discovered (as I too have done) that psychologically the case for any reform is always weak, and that the real strength of intellectualism lies, not in its logic or in any appeal it makes to reason, but precisely in the subtlety with which it panders to powerful psychological instincts, such as the desire for rest and finality and relief from doubt. It appears to be at bottom this form of intellectual indolence which generates its reluctance to conceive knowledge as always on the move and as radically and essentially progressive and explains its clinging to a pre-Copernican absoluteness and fixity of terms, meanings, and other constituents of the conceptual cosmos, which can be approximately realized only by degrading them into words that preserve their "form" in whatever context they are used. Professor Dewey circumvents and leaves behind this whole body of prejudices by invading the logical ground on which vast herds of universals, propositions, and syllogisms have always been supposed to be browsing peaceably and securely, by drawing attention to the enormous omissions which are perpetrated in the intellectualist census of this population, and by pointing out that there exist goats as well as sheep and even ravening wolves.

But he mixes admirable caution with his boldness when he puts aside the question whether the discrepant types he instances are not all there is and contents himself with showing that *some* judgments at least are "practical," without discussing whether his doctrine does not apply also to those which are commonly called "theoretic." His arguments are, however, so convincing that they may well render it opportune to raise also this further question, and

[2] Cf. D. L. Murray's "Pragmatism," page viii.

this is what I shall attempt to do. Granting that there is a definite class of "practical" judgments, recognizable by the fact they exhibit an *is-to-be* in their copula instead of an *is,* imply a reference to something to be done and appeal to the future for a decision as to their value, and so as to their truth or falsity, and taking only the precaution of observing that this practical import may be latent and must not be *assumed* to be absent wherever it is not expressed in so many words, let us ask whether, as a sheer matter of logical fact, this type is not discernible in *all* judgments?

It appears to me to be hardly possible to give anything but an affirmative answer to this question. If, that is, we are careful to concern ourselves with real judgments, and refuse to have "propositions," mere verbal formulas, foisted upon us. This conclusion results from a number of converging lines of reasoning. It may be reached, for instance, by raising the questions of the context of the apparent "theoretic" judgment, and of the motives and aims of its maker. But one has learned from painful experience that numbers of philosophers believe that such questions can be burked by calling them "psychological."

So it is better to insist on the logical implication of the unquestionable fact that every judgment must be regarded as the product of a *selection.* Now by this we should not mean merely the obvious fact that the maker of any judgment may have alternatives in his mind before, and while, he makes it. We should refer rather to the more general fact that every judgment, whether true or false, has somehow to be selected from the whole body of possible judgments, which may be, or be thought to be, relevant, directly or remotely, to the occasion upon which it is made. This appears to be a logical fact of the utmost generality and importance. It can hardly be denied, once we emancipate ourselves from the paradoxical theory, that it is the duty of every judgment to enunciate the totality of truth, irrespective of its relevance to the actual occasion. This theory not only demands an impossibility which no judgment is capable of achieving, but involves the fatuity that every judgment should become one with every other, and overlooks the most obvious characteristic of actual judgments, *viz.,* that they are meant to convey, not all truth or truth in general, but *relevant* truth.

If then every judgment is a selection from an indefinitely wider body of possible alternatives, and must be logically conceived as such a selection, it becomes proper to ask, (1) how is such a selection conceivable? and (2) why should such a selection be made?

1. No reason for selection can be derived from the mere notion of a coherent system of truth, alike whether that system is conceived Platonically, as static and rigid, or as dynamic and progressive. For

just in so far as the system coheres, it forms an integral whole in which truths inhere and out of which they do not fall. If, therefore, there are to be separate truths at all, they have to be taken out of their systems by force. The selection which constitutes the separate truth must sever the judgment affirmed from its systematic logical context and must pretend that it can exist, or be used, apart from it. But must not this procedure always appear as an interference with "fact," as an arbitrary *act* which does violence to the logical connections of the subject? It must, moreover, always involve a *risk,* not merely general, but perfectly specific. As representing absolute truth the judgment is disqualified *ab initio* by being a selection: that is admitted, and does not matter. The real risk of error to which it is subject consists in the fact that even for the purpose in hand what has been selected may not have been precisely what was required, but either too little or too much. *I. e.,* the selection, though it may be "true," *i. e.,* part of "the truth," may not be the really relevant part, and so for the purpose of the reasoning it may be a "mistake." There is, therefore, need for some one who will take upon himself this risk of *selecting rightly,* and in default of such a person there can not be any judgments for logic to consider. A selective *agent,* therefore, must be found to take the risk which every selection involves, and his selection plainly is an *act.* In this sense, and to this extent, it appears to be undeniable that a factor of "arbitrariness" and dependence upon a "subject" enters into the very notion of a judgment.[3] To abstract from this, as logic has hitherto done, involves a *fiction,* which ought to be explained and justified, or else abandoned.

2. The conception of a judgment as an act which implies an agent to make it and to risk the consequences, only becomes more impressive when we pass to the second question as to *why* the selection (which is the judgment) should be made, for it is then clearly seen to be impossible to account for this without a reference to the ends and means of the agent. A certain selection from total truth is made, because it is judged to be relevant to the agent's purposes. It must, moreover, be judged to be *preferable* to any *other* selection which in abstraction from his purpose and situation might equally be called "true." In cases where the judgment has actually been preceded by deliberation there was, of course, mental awareness of the superiority, or *better value,* of the selection made. In cases where the appropriate selection seemed so evident that no consideration of alternatives seemed requisite, there is always logically a possibility of revising and reversing the judgment after it has been made. In either case, the judgment made was chosen be-

[3] Cf. my "Formal Logic," pages 23, 120.

cause it seemed the *best* its maker could think of. A reference therefore to a "*good*" aimed at, and a valuation performed, by the maker of the selection is always formally implied. At least "logically," if not also "psychologically." To put it otherwise, no one can be conceived as making and upholding a judgment, unless he is convinced that it is a better judgment to make than any other, and the *best* for the occasion which evoked it. For had he thought of a *better,* he would, of course, have made *that.*

We arrive then by a different route at the valuations which Professor Dewey has so admirably shown to be a kind of practical judgment. And if *all* judgments imply a valuation, are not all judgments practical? If all judgments are *acts* and aim at "goods" and claim to be "better" than others and the "best" conceivable, need we hesitate to declare that they are "practical"? Surely the judgments called "theoretic" do not differ from those admittedly "practical" in these vital respects. True, the good they refer to is that of any "end" any agent may desire and aim at; it is plainly not restricted to specifically moral or material goods, and covers also the ends of the "theoretic" sciences; but what of that? It is surely time that the critics of the new logic should give up confounding these two senses of good,[4] and recognize as the superior genus the older, and more comprehensive Greek sense, which equates ἀγαθόν and τέλος. True, also, the so-called "theoretic" judgments do not, as Professor Dewey notes, usually declare a reference to an act to be done *in their verbal form;* but what of that? Is there not always such a reference, when we trace them back to their occurrence in an actual situation in which a choice has to be made between one judgment and another? This choice is surely an act, a something-to-be-done, whether or not it is expressed in words which advertise the fact: abstract from this implication of a choice, and you destroy the judgment. It is, however, easy and fatally seductive, to take the words of the judgment in abstraction from the occasion on which they were used: for the words retain their form and a sort of meaning acquired by past usage. This "dictionary-meaning" certainly has not, as such, any reference to any practise. But it is not strictly actual meaning at all. When, therefore, we make this abstraction and talk about dictionary-meanings we ought not to deceive ourselves and to continue to talk about judgment: we have by this abstraction substituted the "proposition" for the live judgment, and radically altered its logical character. We are henceforth dealing with "forms" whose "meaning" is merely potential. Thus we finally come upon the question which every conscientious logician

[4] They are easily distinguished by their opposites, "bad" and "evil."

should continually ask himself and which not even the most conservative will be able to shirk for ever, *viz.*, whether this substitution of the proposition for the judgment is not the essential fallacy of Formalism, and the very doctrine which is nearest and dearest to the heart of intellectualist logic?

F. C. S. SCHILLER.

CORPUS CHRISTI COLLEGE,
OXFORD.

SOCIETIES

NEW YORK BRANCH OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

THE New York Branch of the American Psychological Association met at Columbia University in conjunction with the Section of Anthropology and Psychology of the New York Academy of Sciences on April 19. There were afternoon and evening sessions, with dinner at the Faculty Club. The following papers were read:

Relative Performances of Negroes and Whites in Some Mental Tests. —G. O. FERGUSON, JR.

Tests were made upon 486 white and 421 colored pupils in the grammar and high-school grades of Richmond, Fredericksburg, and Newport News, Virginia. In the Woodworth and Wells "Mixed Relations" test, and in the Trabue "Completion" test, the colored children scored approximately three fourths as high as the white children; in the "Columbia Straight Maze" test there was no appreciable racial difference in ability; in a cancellation test the colored girls were slightly superior to the white girls, and the colored boys did as well as the white boys.

The colored pupils were divided into four classes on the basis of racial purity as indicated by skin color, hair texture, and facial and cranial conformation. In the mixed relations and completion tests, the pure negroes, the negroes three-fourths pure, the mulattoes, and the quadroons scored respectively as follows: approximately 60, 70, 80, and 90 per cent. as high as whites.

The variability of the colored pupils as a whole was fully as great as that of the whites, likewise the variability of the mulattoes. But the pure negroes, the negroes three-fourths pure, and the quadroons were somewhat less variable than the whites. The results of the experiments will be published in full in the *Archives of Psychology*.

Distribution of Time in School Exercises.—ROBERT A. CUMMINS.

The investigation concerns the practical application of the laws of memory in such public-school exercises as geography and history, and deals with the relative advantages of an irregular distribution of time as compared with the regular distribution which is commonly used in the arrangement of the school programme.

Subjects.—The subjects used in the experiment included pupils in grades from the third to the seventh, a total of 699.

The seventh-grade pupils were in the Rutherford, New Jersey, public school and were mostly Americans of good social standing. Those of the other grades were from the Lyndhurst, New Jersey, public schools and represented about 50 per cent. of foreigners, mostly Italians and Poles, and were of a rather low grade of economic and social standing.

Materials.—The standard one-column addition sheets of Thorndike were used with the third and fourth grades; the division sheets devised by Kirby were used in the fifth grade; in the upper grades the geography and history material used was devised by the writer and consisted of a selection of principles and facts of geography condensed into brief sentences and printed on sheets 6 x 9 and 6 x 12 inches. These sheets were passed out for study. These, after a given length of time, were taken up and other sheets passed out. These latter sheets were the same as the first ones except that all the *important* words were omitted and the numbers, which, by the way, were placed in parentheses in front of these words on the study sheets, indicated the missing words. The pupils were required to write on separate scoring sheets as many of these missing words as possible in a given time.

Task.—The task assigned in all the grades consisted in *doing* the exercises in addition, division, geography, or history, as the case might be, so many minutes, say 5, 10, or 15, per day or per every other day, or what not, according to the arrangement of the time schedule for each group. A total of 115 minutes was used with the third and fourth grades doing addition. The same time was used with the fifth grade doing division, the measurement being taken from the mid-point of the initial fifteen minutes of practise to the mid-point of the final fifteen minutes of practise, *i. e.*, 100 minutes of practise were measured. In the case of the sixth and seventh grades doing geography and history a total of 120 minutes was used in the experiment, the measurement being taken from the mid-point of the initial fifteen minutes of practise to the mid-point of the final fifteen minutes of practise, *i. e.*, 105 minutes of practise were measured.

Distribution of Time.—Several different schedules of time distribution were carried out, which can not be described here in detail, but suffice it to say that the main comparison was made between a regular distribution, *i. e.*, 15, 15, 15, etc., or 10, 10, 10, etc., per day, or per every other day, as the case might be, with an *irregular* distribution, *i. e.*, 15, 15, 10, 10, 5, etc., or a decreasing number of minutes and an increasing time-interval between the periods of practise.

Time of Day.—No special effort was made to keep the time of day constant. Some classes worked in the afternoon and some in the forenoon. A check was kept on this and no appreciable difference seems to be manifest by this factor.

Stress.—In the beginning it was aimed to stress accuracy at least enough to keep up to the standard set in the initial practise and if possible to show a consistent gain in same. This was done.

Conductors of the Experiment.—The writer personally conducted all the initial and final practises, the entire experiment with the sixth and seventh grades and practically all the work with the lower grades. In a few instances it was impossible because of lack of time to get around to all the sections at the time appointed, and in such cases the teacher took charge of the practise. All the teachers were in the rooms during all the work and consequently were able to take charge without any change in either the stress or the method.

Conclusion.—The results show an improvement of about 50 per cent. in addition, 100 per cent. in division, and from 50 to 150 per cent. in geography and history, with a noticeably larger increase in case of the groups working according to the irregular distribution of time. In point of accuracy there was an increase of 1 to 9 per cent. in all cases. The experiment seems to warrant the conclusion that an irregular distribution of time is more advantageous in the case of such school subjects as are here considered.

Report on Experiments with the Hampton Court Maze.—H. A. RUGER.

A preliminary report of experiments now in progress, to be reported in full at a later date.

Completion Tests with Public-School Children.—M. R. TRABUE.

After testing over six thousand public-school children with a series of fifty-six mutilated sentences, twenty-four of the sentences were selected to serve as a language scale.[1]

Sentences were used rather than paragraphs, because it was believed that the paragraph was too large a unit of thought for the

[1] Cf. M. R. Trabue: "Some Results of a Graded Series of Completion Tests." *School and Society,* Vol. I., pages 537–540.

child in the lower grades to handle successfully. The mental labor required of the teacher in evaluating paragraph completions has heretofore kept teachers from making much use of completion tests. The short sentence units here presented to the child for completion and to the teacher for evaluation seemed to eliminate many of the objections which have been brought against the use of completion tests with public-school children.

Since it was desired to test the child's ability to think about and to use intelligently the ordinary words of the English language, the subject-matter of the sentences was taken from general experience and human relations, avoiding in so far as possible the more specialized fields of knowledge.

An elaborate scheme of evaluated completions was at first followed in scoring each sentence, giving five points score to each perfectly completed sentence, four points to each sentence only slightly imperfect, three points to each sentence containing a more serious error, two points to a very imperfectly completed sentence, and one point if the sentence showed any evidence whatever that the child had understood the printed words. The present scheme of scoring gives two points score where five were originally given, one point where four or three were given and no score at all where two or one were at first assigned.

That the present method of scoring is practically as reliable as the older more elaborate method is indicated by the fact that the fifty-six sentences tend to hold their relative rank regardless of which method is used. The rank obtained by testing fifty-seven pupils in the last half of the eighth grade showed a correlation (Spearman's method of squared differences) of .965 with the rank obtained from testing thirty-four pupils in the first half of the sixth grade, when the older method of scoring was employed, while with the newer method of scoring, $r = .9623$. The ranks obtained by the two methods from the fifty-seven pupils in the eighth grade gave a correlation of .9823, and with the thirty-four pupils in the sixth grade, $r = .9768$. Such small differences between the two methods of scoring the tests were not thought sufficient to warrant the enormous amount of additional labor required to score the sentences by the old, more elaborate scheme.

Since each of the twenty-four sentences of Language Scale *A* may receive two points credit, the maximum score is forty-eight points. The average scores in Language Scale *A* of over five thousand children in three different school systems are given below by grades, the P.E. of any grade average being 3.5 points.

School Grade ..	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Av. Score	3.4	7.7	12.1	16.2	19.5	22.5	26.4	28.9	32.9	34.8	37.3

An Experimental Study in Values.—MARK A. MAY.

The work here reported represents a preliminary attempt to apply the order of merit method to the study of "religious values." The materials used for the experiment were twenty-five religious situations, the most of which are found in any order of worship of Protestant churches. The subjects were asked to imagine themselves in each of these situations, and then to arrange them in the order of their merit for pure pleasure. After this arrangement had been made, they were asked to arrange the same material a second time for its religious value—*religious* value being defined as "communion with God." Then still a third arrangement was made for moral value. Fifty students in Union Theological Seminary judged this material in each of these three ways.

The most significant features of the investigation may be summed up under the following heads:

1. The fact that fifty judges judged these situations without complaining that it could not be done would seem to indicate that if a sufficient number of competent judges could be obtained it would be possible to derive a scale for measuring the relative values of religious and moral situations.

2. By having the same material judged according to three different criteria we are able to analyze a given situation and to determine its moral, religious, and esthetic value.

3. The experiment shows that on the whole this is a very satisfactory method of defining and bringing out of obscurity what we mean when we talk in such vague terms about the "values of life."

The Study of Foreign Languages in Relation to Standing in Psychology.—WILL S. MONROE.

A preliminary report of work now in progress.

Scientific Method in the Interpretation of Dreams.—LYDIARD H. HORTON.

The question here considered is whether dream interpretations shall represent the state of the dreamer's mind or the mere fancy of the interpreter. Criticism is directed at the aprioristic and oftentimes hit-or-miss practises of the Vienna and Zürich schools of psychoanalysis.

For illustration, a simple dream is interpreted by the current methods of psychoanalysts. First, according to the "reductive method" of Freud, it is made out as symbolizing an infantile and sexual wish-fulfilment, expressing a *"voyeur"* component of the *Libido.* Secondly, the dream is re-interpreted by Jung's "constructive method," so as to gloss over the gross Freudian phallicism.

It is now made to mean that the dreamer is impelled to higher biological duties, namely, marriage and professional success.

The plausibility of these interpretations once shown, they are next proved wide of the mark, by the fact that the dream can be more adequately accounted for in another way, *i. e.*, by a proposed "reconstitutive method."

This method aims to "reconstitute" the dream-thought (both imaged and imageless) by tracing the wave of nervous excitation from its origin in a primary stimulus-idea through a specific apperception-mass into a derived system of secondary images which form the manifest dream content. The derivation of the latter must be concretely demonstrated in the "settings of ideas,"—not assumed.

The reconstitution of this particular dream illustrates the *reductio ad absurdum* of the two previous psychoanalytic "solutions." The fact that either of them would apparently have satisfied the demands of the problem is an artifact evolved by the interpreter's confabulations and forcing of analogy. It is a matter of "will to interpret."

The Freudian technique is unsound in so far as it fails to consider the meaning of dream-items as determined by "unconscious settings of ideas."

The study of individual differences in dreams indicates that the supposed "language of dreams" is an artifact; that the psychic "censorship" is only an occasional phenomenon. The reconstitutive method brings into relief the trial-and-error character of the dreaming process, depicting the organism as attempting a physiological resolution of persisting and unadjusted stimulus-ideas. The images evoked in the dream have the psychological character of "trial percepts" or tentative apperceptions.

Sleep favors apperceptive errors, hence the inconsistency and bizarrerrie of the dream. The significance of a dream can be found only by reconstituting it from the above standpoint.

Studies in Recall.—GARY C. MYERS.

Two experiments in progress were reported, Reconstructive Recall and Confusion in Recall. In the first experiment the subjects daily tried to recall as much as possible of certain selections which they once knew very well, but which they had forgotten wholly or in part. The subjects wrote introspections. Several times as much was reconstructed at the end of a few weeks as the amount reproduced in the first recall. Interesting chains of associations were obvious. Paragraphs and sentences mutilated or entire were recalled and improved upon or linked with others in subsequent recalls.

The results thus far endorse the common statement of psychologists, "We never wholly forget," and they emphasize the importance of the most favorable situations to elicit the learner's reproduction. They suggest a prominent existence of subliminal association, and, most of all, a serious neglect in almost all memory experiments to consider the time for recall as a factor in measuring memory, and, in case of group experiments, to provide any time limit for recall.

In the second study the purpose is to determine the increase of confusion with the increase of retention interval. The following test is used.

273	732	372	723
beat	tow	desert	waist
statue	meat	week	pear
dessert	waste	stake	toe
steak	kernel	beet	meet
weak	pair	statute	colonel

The subjects are told to study the materials so as to be able to reproduce the correct words under their respective numbers. A hundred subjects, tested individually, were told to study until they were sure they could give perfect reproduction. Their times for learning and for recall were kept. They were surprised by a request for a second recall after three weeks. Five minutes for learning and 3 minutes for recall were allowed 278 public-school children tested. They were surprised by a second recall after one day and a third recall 5 weeks later.

Partial results of the latter group only were presented. The average percentage of the correct words and figures that are recalled in correct order is used to measure the amount of absence of confusion. By the 159 boys and girls of the high school the average per cent. for words in immediate recall is 71.3 and after one day 60.9. For figures the percentages are 74.4 and 70.4. By the eighth grade the records are, Words 78.8 and 62.9; figures 73.8 and 51.5. Seventh grade, words 56.1 and 39.7; figures 53.3 and 27.4. Sixth grade, words 60.0 and 43.7, figures 61.9 and 49.6. This shows confusion in the first recall and a very pronounced increase in confusion after one day.

A. T. POFFENBERGER, JR.,
Secretary.

COLUMBIA UNIVERSITY.

REVIEWS AND ABSTRACTS OF LITERATURE

The Genetic Aspects of Consonance and Dissonance. HENRY T. MOORE. *Psychological Monograph,* Vol. XVII., No. 2, 1914. Pp. 80.

Facts do not always lead and give direction to theory. This is evident from a survey of various of the recent studies of consonance. In judgments of preference in the comparison of different intervals subjects may be instructed to eliminate affective qualities and to note but one cognitive quality such as unitariness, to judge on the basis of several criteria, or they may merely be asked for preferences. Under the last two conditions there can be no guarantee that different observers adopt the same basis for judgment, or that the same individual judges throughout by the same standard. Yet all these methods have been followed in recent studies in the United States and England.

Certain experimenters, *e. g.,* Meyer and Valentine, have shown that an observer's attitude toward musical intervals, especially unfamiliar ones, changes considerably with practise in the hearing of such intervals. These facts, in connection with certain well-known changes in preference for intervals in musical practise, have led Moore to attack the problem of consonance and dissonance from the genetic point of view. After a brief statement of leading theories of consonance, including the author's genetic theory, historical evidence of such changes in preference is examined. With the latter we are not here concerned, as the fact of such changes in mere preference is not disputed to-day by any one. One feels that some of the theories reviewed do not receive full justice—though probably as much justice as they have received in other reviews in America,—but this is likely due mainly to the lack of space. For example, Krueger's theory is presented only in its negative aspects,—its treatment of the causes of dissonance. English-speaking investigators, however, may well be grateful for the clear statement of theories for which they would otherwise have to go over hundreds of pages of German literature.

We may also pass over the author's statement of his genetic theory as it is mainly a statement of facts and not of principles of explanation.

The experimental part is divided into *preliminary* and *final* experiments. We are told that "the intention of the preliminary experiment was twofold, to find in the case of each subject his degree of consistency and his degree of consonance" (p. 41). This is done by the method of "paired comparisons," applied to 19 resolutions. A resolution is "the dominant seventh plus the chord into which it resolves." Two seconds were allowed for the dominant seventh and three for the following chord in each resolution. A cabinet organ of tempered scale, made by Estey Organ Company, Boston, was used. Nine subjects served in the experiment, of whose musical antecedents nothing is said excepting casually. Two of the subjects are violinists, one of them ranking highest in the "preference" for dissonances. A third subject was Dr. Langfeld of the Harvard laboratory. These nine subjects are ranked as to consistency and also as to preference for dissonances.

In the *final* experiments each hour of experimentation was begun by

obtaining a series of standard judgments, by the method of paired comparisons, the subject stating not only preference, but also degree of preference on a scale of five, *A, B, C, D, E;* "each interval, played consecutively in a passage of seven parallels, with *c′, d′, e′, f′, d″, c′* as the fundamentals, was compared with each other one played similarly (p. 51). Four intervals only—two consonances, the fifth and the third; and two dissonances, the major and minor seventh—were thus studied. The ninth was added to give a wider range of comparison. After obtaining the standard table of judgments a certain interval was studied for the day. If the seventh, *e. g.,* was being considered, the experimenter "proceeded to play a passage of parallel sevenths, sustaining each interval exactly one minute." This was continued for five minutes, five intervals thus being played. New judgments of preference between the interval in question and each of the other four were then taken, two judgments in reverse order being secured for each pair of intervals. Other introspections—than those of preference and degree—were not required, as Mr. Moore supposed from Pear experiments that other introspections would result in a reduction of the consistency. A repetition of this procedure showed a gain in preference for the dissonant and a loss for the consonant intervals. This was the method of "prolongation." The method of repetition gave similar results. It differed from the former "in that each period, three minutes in this case, was occupied not with sustaining intervals, but with playing repeatedly an entire melody in parallel thirds, fifths, minor or major sevenths, as the case might be. The melody used was, with the exception of one note, within compass of a sixth, so that the same notes recurred with great frequency" (p. 54).

The general results show that the "third loses rapidly, the minor seventh gains equally rapidly, the fifth maintains a fairly constant level, the major seventh rises in value, but less rapidly than the minor seventh" (p. 57). These results agree significantly with those which Valentine obtained from adults and from girls between the ages of nine and fourteen years. They agree with musical history in favoring the assumption "that the degree of consonance increases as a result of the frequency with which an interval is heard" (p. 62). The affective value of the intervals also changes. Affective value increases as we pass from extreme to slight dissonance, the bare consonance possessing the highest degree of pleasantness. Pleasantness then declines "until we reach the point where the interval gives the effect of a true unison, intensified dynamically; at this point follows a second affective rise, but by no means so great as that which marks the transition from dissonance to consonance" (p. 62). For this last point insufficient evidence is yet at hand.

But what does the author mean by consonance? "The phenomenon of consonance, if the theory here advanced is right, is a special case of the adjustment of the inner to the outer relations. The nervous system, by a form of activity that tends with each repetition to become more simple and economical, gradually affects the synthesis of more complex physical relations" (p. 62). That the author has in mind for consonance something different from the affective tone of consciousness is evident in the sentence

following that just quoted, where the affective aspect is considered. The following quotations show that a similar distinction is in mind: "As a decided dissonance it is essentially unpleasant; as a mild dissonance it is pleasant according to the context" (pp. 38, 39). "This is by no means an identification of consonance with the inherent pleasantness of an interval," etc. (pp. 50, 51). Sentences of this kind occur here and there throughout the monograph, and the author not infrequently points out that the affective value of intervals falls with increase of "fusion or synthesis" beyond a certain point of consonance (*e. g.*, p. 50), yet a critical examination of the work before us shows a surprising confusion of terms whose meanings should be kept clearly in mind by both experimenter and subjects. In the first place, the author examines the history of musical preferences for intervals in the final chords in cadences, and from these "preferences" he draws conclusions as to changes with experience in the consonance of intervals. This is precisely where Stumpf, and in fact most authorities, would object most strenuously. Yet our author seems to accept, in the main, Stumpf's conception of consonance. Note the following: "Nevertheless, in spite of considerable disagreement among various authorities as to the exact meaning of tonal fusion, it is quite generally agreed that Stumpf has pointed the way to proper treatment of the problem" (p. 13). The author, let it be noted, does *not* accept Stumpf's arbitrary distinction between consonance and concordance. That he is definitely examining the (or an?) affective aspect in the historical sketch is noted in the statement of purpose: "Now the facts with which we are concerned are of two kinds, those derived from the actual development of *musical feeling,* and those derived from experiments designed to test the conditions of consonance."[1]

A most careful examination has failed to reveal to the reviewer any evidence as to what was to be the basis of the subjects' *preferences* in the experiments. No instructions on this matter seem to have been given—each was left to follow his own idea, and what that was we do not know. Some of the subjects are apparently psychologists, some are musicians, and of most of them we have nothing but the names. Can preferences thus derived be of any value to science? Experiments by the reviewer, recently carried on in the University of Chicago, show, as do also those of Pear, that even experienced musicians and psychologists have extreme difficulty in leaving out of consideration in their judgments of preference the affective tone of intervals. This is true even when such subjects are explicitly instructed not only to disregard the affective tone, but to base judgment on only *one* of the three or more cognitive criteria. No mention of such difficulties is found in the monograph before us.

Mr. Malmburg has recently completed in the Iowa laboratory a study of consonance in which the subjects were asked to base their judgments upon three criteria: "(1) Blending, a tendency to belong together or agree; (2) Smoothness, relative freedom from beats; (3) Purity, relative

[1] Page 20, italics the reviewer's.

absence of richness."[2] Such a method has certainly also its pitfalls. We await with interest Mr. Malmburg's monograph.

JOSEPH PETERSON.

UNIVERSITY OF UTAH.

Theodor Lipps's Neuere Urtheilslehre. GEORG ANSCHÜTZ. Leipzig: W. Engelmann, 1913. Pp. 175.

The author brings together the most recent utterances of Lipps on judgment and closely related topics. This seems desirable from the fact that Lipps's "Logik" has not been revised since its first appearance in 1893, although the author's views have greatly changed, particularly since the appearance of Husserl's "Logische Untersuchungen." The material has been collected from the minor writings, lectures, and occasional remarks by Lipps, together with certain additions by the author that give a logical connection to the whole. It is a drawback that the sources of the different statements are not indicated, and that no distinction is made between the theory of Lipps and the logical supplements.

The fundamental assumptions of the work are the existence of the object and the ego as distinct, but mutually interacting. The forces that direct the interaction and so determine the nature of consciousness and of the universe are demands (*Forderungen*) which objects make on the ego and the ego in certain cases may make on other egos. They are different in that the demands of objects can not be changed or annulled by other demands while the demands of men can. The mental states that result from the fundamental forces are sensation, thought, and apperception. Thought is as different from sensation as higher is from lower. In it, too, the ego is immediately appreciated, in distinction from the object, while in sensation all tend to be confused. Apperception gives order to the whole, it seems to follow a pattern, but in reality is largely original.

The highest of the various forms of mental action is the judgment. In it the claims of the object are recognized, and after preliminary alternation from one to the other, which constitutes doubt, one is recognized and the others are excluded. The object is ordinarily the subject, the demand that it makes the predicate, and the recognition that the object demands something, the predicate. The latter parts of the book are devoted to indicating the ways in which the various opposing demands that meet in the judgment constitute the nature of the universe. In the judgment the object with its demands and the pure ego find their final union and harmonization. Object and ego become but two sides of the unity, but these two sides never disappear. As the plot is revealed we find that all realities dissolve into these demands and their mutual reconciliation. From them grows the complete interrelationship and net-like web of things that really are.

The details of the exposition could only be made clear in brief space to one already familiar with the doctrines of Lipps, and he would not need them. The book in itself is little more than an outline and further con-

[2] Furnished to the reviewer in conversation. Mr. Malmburg's study has not yet appeared from the press, I believe.

densation is not possible. It may be recommended as containing the essentials of the position of the Lipps school in relatively brief compass.

W. B. PILLSBURY.

UNIVERSITY OF MICHIGAN.

JOURNALS AND NEW BOOKS

AMERICAN JOURNAL OF PSYCHOLOGY. July, 1915. *An Experimental Analysis of the Process of Recognizing* (pp. 313–387): ELIZABETH L. WOODS. – Visual, auditory, tactual, and olfactory stimuli were presented to be recognized. An "initial," "intermediate," and "final" level of recognitive experience was found. Imagery becomes less important as recognition progresses. Recognition is described as "an orderly procession of mental events—from clear percept through appropriate reaction to attention-shift—under the direction of the *Aufgabe* or the *Einstellung* to recognize." Summary of theories and classified bibliography. *Certain Social Aspects of Invention* (pp. 388–416): AMY E. TANNER. – Several great inventions are discussed, which show that there often is little relation between the value of an invention and the ability involved in making it, the motives of inventors are very much alike, their methods are very different. *Geotropism in Animals* (pp. 417–427): SAKYO KANDA. – A review of the facts of geotropism is given from the unicellular organism to man. The physiology of animals has much to do with orientation to gravity, consciousness very little. Selected bibliography. *A Comparison of Reflex Thresholds with Sensory Thresholds—The Relations of this Comparison to the Problem of Attention* (pp. 428–437): E. G. MARTIN, B. D. PAUL, E. S. WELLS. – The value of the sensory threshold depends on the state of the higher centers. *The Freudian Methods Applied to Anger* (pp. 438–443): G. STANLEY HALL. – Anger like sex is an important part of the human psyche. The Freudian movement opens a larger field than that of sex in that it calls our attention to the feelings. *Minor Studies from the Psychological Laboratory of Cornell University. On the Variation with Temperature of the Pitch of Whistles and Variators* (pp. 444–449): G. J. RICH. – Whistles and variators vary in frequency with changes in temperature. Formulæ for corrections are given. *Visual Quality as a Determinant of Clearness* (pp. 449–463): J. S. SMITH. – There is no one hue that makes a special appeal to attention. *A Preliminary Study of Vowel Qualities* (pp. 453–456): J. D. MODELL and G. J. RICH. – Vocality can be heard in tones. *A Bibliography of Rhythm* (pp. 457–459): CHRISTIAN A. RUCHMICH. – Supplementary list. *Book Reviews* (460–468). Baldwin Spencer. *Native Tribes of the Northern Territory of Australia:* E. B. T. P. R. T. Guordon, *The Khasis:* E. B. T. C. Forsyth, *Orchestration:* E. B. T. R. M. Ogden, *An Introduction to General Psychology:* CHRISTIAN A. RUCHMICH. *Hugo Muensterberg, Psychology, General and Applied:* CHRISTIAN A. RUCHMICH. Mary Whiton Calkins, *A First Book in Psychology:* CHRISTIAN A. RUCHMICH. Paul Levy, *The Rational Education of the Will:* RAYMOND H. WHEELER. Alfred Binet and Th. Simon,

Mentally Defective Children: FLORENCE MATEER. *Book Notes* (pp. 469–471). Nathan A. Harvey, *The Feelings of Man, their Nature, Function and Interpretation.* Benjamin Dumville, *The Elements of Psychology.* William Stern, *The Psychological Methods of Testing Intelligence.* W. H. Winch, *Children's Perceptions.* George Trumbull Ladd, *What Ought I to Know?* George Trumbull Ladd, *What Should I Believe?* E. R. Murray, *Froebel as a Pioneer in Modern Psychology.* Theodor Ziehen, *Die Grundlagen der Psychologie.* Truman Lee Kelley, *Educational Guidance.* Charles Herbert Elliot, *Variation in the Achievements of Pupils.* Woodbridge Riley, *American Thought from Puritanism to Pragmatism.* Mrs. C. A. F. Rhys Davids, *Buddhist Psychology.* Von N. Braunshausen, *Einfuhrung in die Experimentelle Psychologie. Necrology.* – Stephan Witasek and Ernst Meumann.

Derwenen, J. M. Naturphilosophie. Berlin: Verlag von B. G. Teubner. 1915. Pp. 112.

Ladd, George Trumbull. What May I Hope? An Inquiry into the Sources and Reasonableness of the Hopes of Humanity, Especially the Social and Religious. New York: Longmans, Green, and Company. 1915. Pp. xvi + 310. $1.50.

Miehe, Hugo. Allgemeine Biologie: Einführung in die Hauptprobleme der Organischen Natur. Leipzig und Berlin: Verlag von B. G. Teubner. 1915. Pp. vi + 144.

Taussig, F. W. Inventors and Money-Makers. New York: The Macmillan Company. 1915. Pp. ix + 138. $1.

NOTES AND NEWS

THE first meeting of the thirty-seventh session of the Aristotelian Society was held on November 1, 1915. The inaugural address on "The Moment of Experience" was delivered by the president, Dr. H. Wildon Carr. The moment of experience, he maintained, is the moment in which reality is sensed, the moment in which the mind is in direct and immediate relation to its object. The problem in regard to it is twofold. In the first place the moment has duration and its duration is measurable; it therefore includes the relation of before and after, yet its whole content is a present without internal distinction, although externally distinguished from the remembered past and the imagined future. In the second place its content has the characteristic quality of being a sense-datum and consequently a question arises as to the status of sense-data. Is the essential character of sense-data something which objectively belongs to them, or is it constituted by the mental act in the moment of experience? The problem was illustrated by the fact that the sensation of a rapid movement, such as that of a shooting star, is experienced as a continuous line. It was contended that the usual psychological explanations were based on the assumption that what is mathematically past can not be present sensation

unless some contrivance exists, it may be of a physiological or it may be of a psychological nature, which practically produces illusion. It was argued against this that movement or change is directly sensed, and that this is only possible if what is mathematically past and what is mathematically future are actually present to the mind, and it was claimed that as a simple fact both are present. What, then, is the relation of this mathematical time to psychological duration? According to one view the mathematical succession of instants, which are points, is the reality, and the moment of experience is the more or less successful effort of the mind to grasp or apprehend it. Such a view would involve the contradiction that present reality is a point without duration, a limit between a past and future, between what is no more and what is not yet. According to the other view the psychological duration is the reality and the mathematical series a scheme or diagram by which the reality is imagined or thought. It was argued that the concept of a moment of experience as a concrete universal concept, implied the original synthesis of the contradictions past and future in the concept of a real present. And that further these abstract contradictions, past and future, synthesized in a present moment, became in the concept of activity an organic unity, and, therefore, reality in a higher degree. In the moment of experience the objects present to the mind are sense-data. According to one view this character of the object is not due to its presence in the moment of experience, but the moment of experience is a present moment because the sense-datum is then the mind's object. Sense-data in this view are non-mental or physical, the constituents out of which the mind constructs its concept of the external world. Against this it was argued that such a view failed to explain the special privilege which attaches to the moment of experience over all other moments. On the other hand if the moment of experience is the moment of activity, there is no mystery in its privilege, it is the moment of "attention to life." Finally it was argued that the highest concept of reality is the concept of life, and that the fundamental distinction in philosophy is not the distinction between mind and matter, but between life and consciousness. The task of philosophy is to make explicit the relation between them.

At Columbia University the following changes in the department of philosophy have been made: Dr. George Peckham has been advanced from assistant to lecturer, Rev. N. T. Boggs has been appointed lecturer, and Mr. Walter Veazie has been appointed assistant.

Professor W. C. Ruediger has been appointed director of the newly authorized summer school to be held at George Washington University, Washington, D. C. The school for 1916 will begin June 26, and continue for six weeks.

Mr. Alfred William Benn, author of "The Greek Philosophers" and "History of English Rationalism in the Nineteenth Century" has recently died at the age of seventy-two years.

Professor Alfred H. Lloyd, of the department of philosophy, has been appointed to succeed the late Professor Karl E. Guthe as dean of the University of Michigan Graduate School.